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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,855	10/11/2001	Bungo Yokoo	47434-31	3813

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EXAMINER

EDMONDSON, LYNNE RENEE

ART UNIT	PAPER NUMBER
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1725

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DATE MAILED: 06/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,855

Applicant(s)

YOKOO, BUNGO

Examiner

Lynne Edmondson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

1. Claims 1-14, 19-26 and 28-37 of this application conflict with claims 1-37 of Application No. 842992. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-9 recite the limitation "the insulator" in lines 1-3. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.
3. Claims 10 and 13 recite the limitation "the insulator" in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 13, 14, 18, 22-24 and 39-43 are rejected under 35 U.S.C. 102(a) as being anticipated by Kurpiela et al. (USPN 6215104 B1).

Kurpiela teaches a method of assembling a cartridge type soldering iron assembly comprising a replaceable handle by inserting a sleeve (12) through an opening in the handle (19) and coupled to an electrical connector (figure 10 and col 2 lines 49-55). The heating element (8) is located within the sleeve (figure 1). The sleeve may have a circular or cylindrical cross section (figure 6). As shown in figure 12, the sleeve closely fits the interior of the handle leaving no air passage. The iron comprises an insulating material (52) between the sleeve and distal end of the handle includes a temperature sensor (42) (figure 5 and col 9 lines 20-39). The first handle section is replaced by a quick change thread system through nut 26 and ring 34 (figures 10-12, 14-16, col 9 lines 39-55 and col 11 lines 5-37).

5. Claims 1-5, 22, 25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosslow et al. (USPN 5524809).

Kosslow teaches a method of assembling a cartridge type soldering iron assembly comprising inserting a sleeve (130) through an opening in an insulator (plastic shield 110, col 4 lines 1-6 and col 3 lines 5-56). The insulator is inserted through a hole in the handle (180) and coupled to an electrical connector. Coupling is accomplished by contact fingers (160) (col 2 line 50 – col 3 line 6 and figure 2a). The heating element (230) is located within the sleeve (figure 3). The sleeve has a circular cross section. As shown in figure 3, the sleeve does not contact the interior of the handle and forms an air passage. The handle comprises a carbon filter material (col 3 lines 50-52).

6. Claims 1-9, 13, 15, 19-30, 32, 33, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Cowell et al. (USPN 5329085).

Cowell teaches a method of assembling a cartridge type soldering iron assembly comprising inserting a sleeve (60) through an opening in an insulator (44). The insulator is inserted through a hole in the handle (42) and coupled to an electrical connector. Coupling is accomplished by contact fingers (66) which form a releasable lock with notches (62) (figure 7, col 6 lines 32-62 and lines 63-67). The heating element is located within the sleeve (figure 3). The handle comprises multiple layers (30,31, 40,42) which are releasably attached (threaded couplings, 64) to the insulating (plastic) ring 44 (figures 3, 4 and 6 and col 5 lines 34-65). Finger contacts (45,47) provide electrical connections (col 5 line 66 – col 6 line 11). The sleeve has a circular cross

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section. As shown in figure 6, the there is a portion of the sleeve does not contact the interior of the handle and forms an air passage.

7. Claims 1-5, 7-10, 15, 16, 18-24, 26-33 and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Vella et al. (USPN 4773582).

Vella teaches a method of assembling a cartridge type soldering iron assembly comprising inserting a sleeve (116) through an opening in an insulator (102). The insulator is inserted through a hole in the handle (82) and coupled to an electrical connector (figure 3 and col 3 line 50 – col 4 line 3). Connectors are attached by contact fingers (176) which form a releasable lock with notches (184) (figure 78 and col 6 lines 6-50). The heating element is located within the sleeve (80) (col 3 lines 50-68). The insulator comprises rings (104, 108) at a predetermined distance (col 4 lines 15-33) and comprises a temperature sensing element (col 9 lines 5-30). The forward end of the handle is between ring 108 and the proximal end of the insulator (figure 3) and is releasably attached (col 5 lines 11-26). The sleeve has a circular cross section. The rear portion of the sleeve is firmly placed in contact with the handle (figure 3, col 5 lines 27-60 and col 7 lines 22-42) shown in figure 6, the there is a portion of the sleeve does not contact the interior of the handle and forms an air passage. The sleeve is completely inserted into and flush with connector 106. The connector 170 forms an acute angle relative to the longitudinal axis of the sleeve (figure 8). Connector 148 forms an acute angle on one side and a 90 degree angle on the other (figure 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosslow et al. (USPN 5524809) in view of Rossnagel (USPN 5843197).

Kosslow teaches a method of assembling a cartridge type soldering iron assembly comprising inserting a sleeve (130) through an opening in an insulator (plastic shield 110, col 4 lines 1-6 and col 3 lines 5-56). The insulator is inserted through a hole in the handle (180) and coupled to an electrical connector. Coupling is accomplished by contact fingers (160) (col 2 line 50 – col 3 line 6 and figure 2a). The heating element (230) is located within the sleeve (figure 3). The sleeve has a cylindrical cross section. As shown in figure 3, the sleeve does not contact the interior of the handle and forms an air passage. The handle comprises a carbon filter material (col 3 lines 50-52). However, the carbon filter is not further disclosed, neither is a discharging step taught.

Rossnagel teaches carbon filter for a solder iron (col 1 lines 33-35 and col 2 lines 5-13) comprising foam (col 7 lines 44-54) wherein the material is chosen to discharge static electricity known to be a problem in soldering operations (col 2 lines 26-31 and col 3 lines 3-12).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to employ a foam filter to remove solder smoke from the work area (Kosslow, col 3 lines 50-56) and to provide a discharging step to facilitate the soldering process while increasing safety (Kosslow, col 1 lines 17-27).

Allowable Subject Matter

9. Claims 11, 17 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Although it is known in the art to employ temperature sensing and sensitive materials as solder iron members there is no disclosure of such a member changing color to indicate a temperature change. When color changes are used as an indicator they are external to the solder iron. See Kobayashi et al. (USPN 5542600). Neither is a connector angle of 45 degrees disclosed. Vella (USPN 4773582) teaches various angled connectors but none of the angles are defined.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aske (USPN 3905755, replace handle), Claghorn et al. (USPN 4700031, replace handle), Cowell (USPN 4839501, structure), Fortune (USPN

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3883716, structure), Bonnema (USPN 5944508), Feinier (USPN 5945015), Urban (USPN 5094384), Oki (JPN 53-118524 A) and Liechtenst et al. (DE 3929585 A1).


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (703) 306-5699. The examiner can normally be reached on M-F from 7-4 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7118 for regular communications and (703) 305-7115 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

Lynne Edmondson
Examiner
Art Unit 1725

LRE
June 6, 2002


TOM DUNN
SUPERVISORY PATENT EXAMINER
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